



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,276	04/19/2004	Teruo Koike	ST3001-0042	9916

39083 7590 05/21/2007  
CERMAK & KENEALY, LLP  
515 EAST BRADDOCK RD SUITE B  
Alexandria, VA 22314

EXAMINER
----------

PAYNE, SHARON E

ART UNIT	PAPER NUMBER
----------	--------------

2875

MAIL DATE	DELIVERY MODE
-----------	---------------

05/21/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/826,276	<b>Applicant(s)</b> KOIKE ET AL.	
	<b>Examiner</b> Sharon E. Payne	<b>Art Unit</b> 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 3/5/07.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4, 7-13, 15-17, 20-22 and 25 is/are allowed.
- 6) ☒ Claim(s) 5, 6, 14, 18, 19, 23, 24 and 26-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (U.S. Patent 7,048,412) in view of Oyama (U.S. Patent 4,928,214).

Regarding claim 5, Martin et al. discloses a vehicle lamp for emitting light and forming a predetermined light distribution pattern, comprising a plurality of light sources (abstract), a plurality of corresponding reflective surfaces (abstract), wherein each of said light sources includes at least one LED array (abstract) with LED chips arranged in a row (Fig. 19A, see squares), and each of said reflective surfaces is arranged in combination with one of said light sources to generate light beams each having a certain light distribution pattern (Figs. 19A-19D) the light sources and reflective surfaces configured such that each of the light beams having a certain light distribution pattern are superimposed with each other to form said predetermined light distribution pattern (Fig. 19C). and a light source holder shaped in a substantially polygonal form having sides (Figs. 19A-19D) and a longitudinal axis in a direction that is substantially parallel with an optical axis of said lam (Figs. 19A-19D), wherein each of the sides includes at least one of said plurality of light sources (Fig. 8B). Martin et al. does not disclose a shade located in a lateral direction of the light source holder. Oyama discloses a shade

located in a lateral direction from the light source holder (Fig. 1, see right and left of source) and in a direction substantially perpendicular to the longitudinal axis of the light holder (Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the configuration of Oyama in the apparatus of Martin et al. to produce the desired light distribution for the headlamp. See Fig. 1 of Oyama.

Regarding claim 23, Martin et al. discloses the LED chips being tilted with respect to an optical axis of the lamp so as to direct light to one of the reflective surfaces (Fig. 22, top middle).

3. Claims 6 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. in view of Abtahi et al. (U.S. Patent 5,890,794).

Regarding claim 6, Martin et al. discloses a vehicle lamp for emitting light and forming a predetermined light distribution pattern, comprising a plurality of light sources (abstract), a plurality of corresponding reflective surfaces (abstract), wherein each of said light sources includes at least one LED array (abstract) with LED chips arranged in a row (Fig. 19A, see squares), and each of said reflective surfaces is arranged in combination with one of said light sources to generate light beams each having a certain light distribution pattern (Figs. 19A-19D) the light sources and reflective surfaces configured such that each of the light beams having a certain light distribution pattern are superimposed with each other to form said predetermined light distribution pattern (Fig. 19C). and a light source holder shaped in a substantially polygonal form having

Art Unit: 2875

sides (Figs. 19A-19D) and a longitudinal axis in a direction that is substantially parallel with an optical axis of said lam (Figs. 19A-19D), wherein each of the sides includes at least one of said plurality of light sources (Fig. 8B). Martin et al. does not disclose a cylindrical lens.

Abtahi et al. discloses at least one of the LED arrays including a cylindrical lens (abstract, Fig. 5 on the outside) having a longitudinal axis in a row direction of the at least one of the LED arrays (Fig. 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the configuration of Abtahi et al. in the apparatus of Martin et al. to protect the LEDs while transmitting their light.

Regarding claim 24, Martin et al. discloses the LED chips being tilted with respect to an optical axis of the lamp so as to direct light to one of the reflective surfaces (Fig. 22, top middle).

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Oyama as applied to claim 5 above, and further in view of Abtahi et al.

Regarding claim 14, Martin et al. and Oyama do not disclose a cylindrical lens. Abtahi et al. discloses at least one of the LED arrays including a cylindrical lens (abstract, Fig. 5 on the outside) having a longitudinal axis in a row direction of the at least one of the LED arrays (Fig. 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the configuration of Abtahi et al. in the apparatus of Martin et al. and Oyama to protect the LEDs while transmitting their light.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. in view of Oyama as applied to claim 5 above, and further in view of Bezos et al.

Regarding claim 18, Martin et al. and Chen do not disclose a control system. Bezos et al. discloses the vehicle lamp being configured such that one of a number and a position of the LED chips to be turned on in each LED array or between LED arrays can be varied such that the predetermined light distribution pattern can be varied (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the control system of Bezos et al. in the apparatus of Martin et al. and Oyama to signal other car in a predetermined way. See the abstract of Bezos et al.

6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. in view of Abtahi et al. as applied to claim 6 above, and further in view of Bezos et al.

Regarding claim 19, Martin et al. and Abtahi et al. do not disclose a control system. Bezos et al. discloses the vehicle lamp being configured such that one of a

number and a position of the LED chips to be turned on in each LED array or between LED arrays can be varied such that the predetermined light distribution pattern can be varied (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the control system of Bezos et al. in the apparatus of Martin et al. and Abtahi et al. to signal other car in a predetermined way. See the abstract of Bezos et al.

7. Claims 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (Figs. 8A, 8B, 19A-19D; hereinafter "Martin et al. I") in view of Martin et al. (Fig. 1C, hereinafter "Martin et al. Prior Art").

Concerning claim 26, Martin et al. I discloses a light source including at least three LED arrays (Figs. 8A and 8B), each LED array including a row of LED chips formed thereon (reference numbers 810-1, 810-2 and 810-3), at least three reflector surfaces located adjacent said at least three LED arrays (Fig. 8B, reference numbers 814-1, 814-2 and 814-3), respectively, each of said reflector surfaces being configured to direct light emitted from one of said at least three LED arrays into a certain light distribution pattern such that the at least three reflector surfaces produce a plurality of certain light distribution patterns (Fig. 8B), and said plurality of certain light distribution patterns combine to form a predetermined light distribution pattern (Figs. 19A-19D). Martin et al. I does not disclose the at least one row of LED chips extending substantially perpendicular to an optical axis of the LED type lamp.

Martin et al. Prior Art discloses at least one row of LED chips extending substantially perpendicular to an optical axis of the LED-type lamp (Fig. 1C).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the configuration of Martin et al. Prior Art in the apparatus of Martin et al. I to produce the desired lighting pattern.

Regarding claim 27, Martin et al. I discloses a light source holder located adjacent said at least three reflectors (Fig. 8B, middle) and having a plurality of sides extending in a direction parallel to an optical axis of the LED type lamp (Fig. 8A) wherein at least one of said at least three LED arrays is located adjacent at least one of said plurality of sides (Fig. 8B).

Concerning claim 28, Martin et al. I discloses a plurality of light sources each including at least one row of LED chips (Fig. 8A) a reflector located adjacent the light sources (Fig. 8B) a light source holder including at least three surfaces that each extend substantially parallel to the optical axis of the LED type lamp (Figs. 8A and 8B) and the at least one of the LED chips is oriented on each of the at least three surfaces such that light emitted from the LED chips is directed towards the reflector (Figs. 8A and 8B).

Martin et al. I does not disclose the at least one row of LED chips extending substantially perpendicular to an optical axis of the LED type lamp.

Martin et al. Prior Art discloses at least one row of LED chips extending substantially perpendicular to the optical axis (Fig. 1C).



It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the configuration of Martin et al. Prior Art in the apparatus of Martin et al. I to produce the desired lighting pattern.

Regarding claim 29, Martin et al. discloses a plurality of LED chips formed in an LED array on at least one of the surfaces of the light source holder (Fig 8A).

Concerning claim 30, Martin et al. discloses each of the light sources includes a plurality of LED chips (Fig 8A) and at least three surfaces that extend along the optical axis of the lamp (Fig. 8B), each of said surfaces including at least one of said plurality of LED chips located thereon (Fig. 8B), and said reflector including a plurality of different shaped reflective surfaces each corresponding to a different one of said surfaces of said light source holder (column 4, lines 48-55).

#### ***Allowable Subject Matter***

8. Claims 1-4, 7-13, 15-17, 20-22 and 25 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter. The prior art fails to disclose a vehicle lamp having a light source holder shaped in a substantially polygonal form having sides and a longitudinal axis in a direction that is substantially parallel with an optical axis of the lamp, wherein a first side includes at least a first LED array with the LED chips arranged in a row that extends substantially parallel to the optical axis and a second side includes at least a second LED array with the LED chips arranged in a row that extends substantially perpendicular to the optical axis as recited in claim 1.

### ***Response to Arguments***

10. Applicant's arguments filed 3/5/07 have been fully considered but they are not persuasive. Applicant argues that Abtahi's cover is not a lens. To the contrary, Abtahi's cylindrical cover is a refractive medium that passes light. Thus, it is a lens, and the rejections stand.

The other arguments are rendered moot due to new grounds of rejection.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharon E. Payne whose telephone number is (571) 272-2379. The examiner can normally be reached on regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2875

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sep



Sharon Payne  
Patent Examiner  
Technology Center 2800